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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

RECEIVED

First Named
Inventor : Lujun Chen et al.

JUL 02 2003

Appln. No.: 09/843,370

Technology Center 2600

Filed : April 26, 2001

Group Art Unit: 2652

For : GIANT MAGNETORESISTIVE SENSOR
HAVING SELF-CONSISTENT
DEMAGNETIZATION FIELDS

Examiner: Brian E. elect
Miller

Docket No.: S01.12-0730/STL9852

8/10
7-7-03
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AMENDMENT

Mail Stop Non-Fee Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

I HEREBY CERTIFY THAT THIS PAPER IS BEING
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27TH DAY OF JUNE, 2003.


PATENT ATTORNEY

This Amendment is in response to the Office Action
mailed on June 16, 2003. Please amend the above-identified
application as follows:

IN THE CLAIMS

Please add new claim 18 and amend claim 17 to read as
follows:

Sub E1
D1

17. (Amended) A method of manufacturing a spin valve sensor for
use with a data storage system to produce a giant
magnetoresistive (GMR) effect in response to applied magnetic
fields, the method comprising steps of:

- (a) forming a first ferromagnetic (FM) free layer
having a magnetization (M_1) in a first direction
when in a quiescent state;
- (b) forming a second FM free layer having a
magnetization (M_2) in a second direction that is